OWNER'S MANUAL
MANUAL DEL USUARIO

RCA
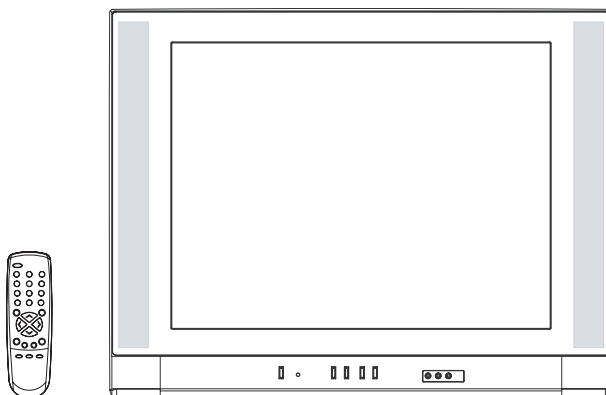
27" MTS STEREO COLOR TELEVISION WITH DIGITAL TUNER
27" TELEVISOR COLOR ESTEREO MTS CON SINTONIZADOR DIGITAL

27F554T

SDTV TUNER

ENGLISH

ESPAÑOL

ATTENTION
ATENCIÓN
If you purchase a universal remote control from your local retailer, please contact the remote manufacturer for the required programming code.
Si usted ha comprado un control remoto universal, por favor comuníquese con el fabricante para el código de programación requerido.

TV/CABLE MODE SELECTION
SELECCIÓN DEL MODO DE TV/CABLE
When shipped from the factory, the TV/CABLE menu option is set to the "CABLE" (Cable Television) mode. If not using Cable TV, set this menu option to the "TV" position.
Al salir la unidad de fábrica, la opción de menú de TV/CABLE se ajusta al modo de "CABLE" (Televisión por cable). Si no utiliza CABLE, ajuste esta opción de menú al modo de "TV".

IF CONTACT WITH CUSTOMER SERVICE IS REQUIRED
PLEASE HAVE THE MODEL NUMBER READY PRIOR TO THE CALL
CUSTOMER SERVICE – 1-800-336-1900
SI NECESITA PONERSE EN CONTACTO CON EL SERVICIO DE ATENCIÓN AL CLIENTE, TENGA A MANO EL NÚMERO
DE MODELO ANTES DE LLAMAR AL
TELÉFONO – 1-800-336-1900

RCA WEBSITE
FOR INFORMATION ON OUR OTHER PRODUCTS, PLEASE VISIT OUR WEBSITE AT
www.rca.com/television

SITIO WEB DE RCA
PARA INFORMACIÓN SOBRE NUESTROS OTROS PRODUCTOS, VISITE NUESTRO PORTAL DE INTERNET EN
www.rca.com/television

Before operating the unit, please read this manual thoroughly.
Antes de utilizar su aparato favor de leer las siguientes instrucciones.

Important Information

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

This symbol indicates that this product incorporates double insulation between hazardous mains voltage and user accessible parts. When servicing use only identical replacement parts.

Caution: To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.

This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.

This symbol indicates important instructions accompanying the product.

WARNING

To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, should be placed on the apparatus.

Refer to the identification/rating label located on the back panel of your product for its proper operating voltage.

FCC Regulations state that unauthorized changes or modifications to this equipment may void the user's authority to operate it.

Caution: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

Caution: Using video games or any external accessory with fixed images for extended periods of time can cause them to be permanently imprinted on the picture tube (or projection TV picture tubes). ALSO, some network/program logos, phone numbers, black borders (sides, top and bottom), etc. may cause similar damage. This damage is not covered by your warranty.

Cable TV Installer: This reminder is provided to call your attention to Article 820-40 of the National Electrical Code (Section 54 of the Canadian Electrical Code, Part 1) which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Important Stand and Base Safety Information
Choose the location for your TV carefully. Place the TV on a stand or base that is of adequate size and strength to prevent the TV from being accidentally tipped over, pushed off, or pulled off. This could cause personal injury and/or damage the TV.
Refer to the Important Safety Instructions on page 3.

Product Registration
Please fill out the product registration card (packed separately) and return it immediately. For US customers: Your RCA Consumer Electronics product can also be registered at www.rca.com/television. Registering this product allows us to contact you if needed.

Product Information
Keep your sales receipt to obtain warranty parts and service and for proof of purchase. Attach it here and record the serial and model numbers in case you need them. These numbers are located on the product.

Model No._____ Serial No. _____Purchase Date: _____

Dealer / Address / Phone: _____
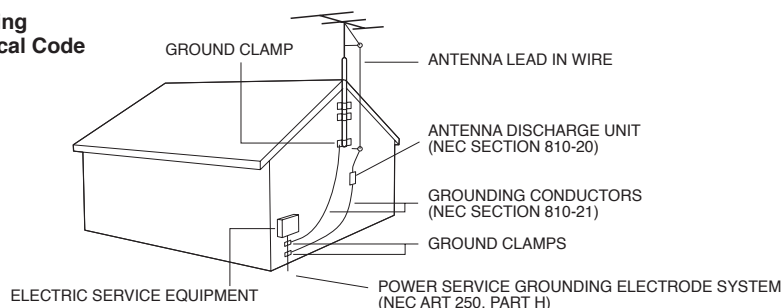
2

ENGLISH

IMPORTANT SAFETY INSTRUCTIONS
Read before operating equipment

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as if the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, or if the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product may contain lead and mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance (www.eiae.org).
16. **Damage Requiring Service -** The appliance should be serviced by qualified service personnel when:

A. The power supply cord or the plug has been damaged;
B. Objects have fallen or liquid has been spilled into the appliance;
C. The appliance has been exposed to rain;
D. The appliance does not appear to operate normally or exhibits a marked change in performance;
E. The appliance has been dropped or the enclosure damaged.
17. **Tilt/Stability -** All televisions must comply with recommended international global safety standards for tilt and stability proper ties of its cabinet design.
    • Do not compromise these design standards by applying excessive pull force to the front, or top, of the cabinet, which could ultimately overturn the product.
    • Also, do not endanger yourself, or children, by placing electronic equipment/toys on the top of the cabinet. Such items could unsuspectingly fall from the top of the set and cause product damage and/or personal injury.
18. **Power Lines -** An outdoor antenna should be located away from power lines.
19. **Outdoor Antenna Grounding -** If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
    Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding connectors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure below.
20. **Object and Liquid Entry -** Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
21. **Battery usage CAUTION -** To prevent battery leakage that may result in bodily injury, property damage, or damage to the unit:
    • Install all batteries correctly, with + and - aligned as marked on the unit.
    • Do not mix batteries (old and new or carbon and alkaline, etc.).
    • Remove batteries when the unit is not used for a long time.
22. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Note to the Cable TV system installer: This reminder is provided to call the Cable TV system installer's attention to Article 820-40 of the NEC (Section 54 of the Canadian Electrical Code, Part 1) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Example of Antenna Grounding as per NEC - National Electrical Code

GROUND CLAMP

ANTENNA LEAD IN WIRE

ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)

GROUNDING CONDUCTORS (NEC SECTION 810-21)

GROUND CLAMPS

ELECTRIC SERVICE EQUIPMENT

POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

3

Contents

4

Features

High Quality Picture Horizontal Resolution more than 500 lines exceeds Super VHS (400 lines) or Laser Disc (430 lines) in resolution.

- **Integrated Digital Tuner -** You can view digital broadcasts without using a Digital TV Set-Top Box.
- **Closed Caption Decoder With Full Text Mode -** Displays text captions or full screen text on the screen for hearing impaired viewers.
- **Picture Adjustments Using The Remote Control -** The On-Screen display allows precise remote control adjustment of BRIGHTNESS, CONTRAST, COLOR, TINT and SHARPNESS.
- **Programmable TV Sleep Timer -** Operable from the remote control, the TV can be programmed for up to 120 minutes to turn off automatically.
- **V-Chip -** The V-Chip function can read the rating of a TV program or movie content if the program is encoded with this information. V-chip will allow you to set a restriction level.
- **Stereo/SAP Reception -** This TV is designed to receive stereo and second audio program (SAP) broadcasts where available.
- **S-Video/Component Video jacks -** A VCR, DVD player, satellite receiver or other audio/video component can be connected to this unit.
- **Video Input Jacks -** This unit is equipped with 3 types of video input jacks. The component video in jacks and S-video in jack enable you to watch the DVD player or the video devices with a high quality picture.
- **On-Screen 3 Language Display -** You can select one of 3 languages, English, Spanish or French for on-screen programming.

Manufactured under license from Dolby Laboratories.

Power source

AC Outlet

Wider Hole and Blade

Polarized AC Cord Plug
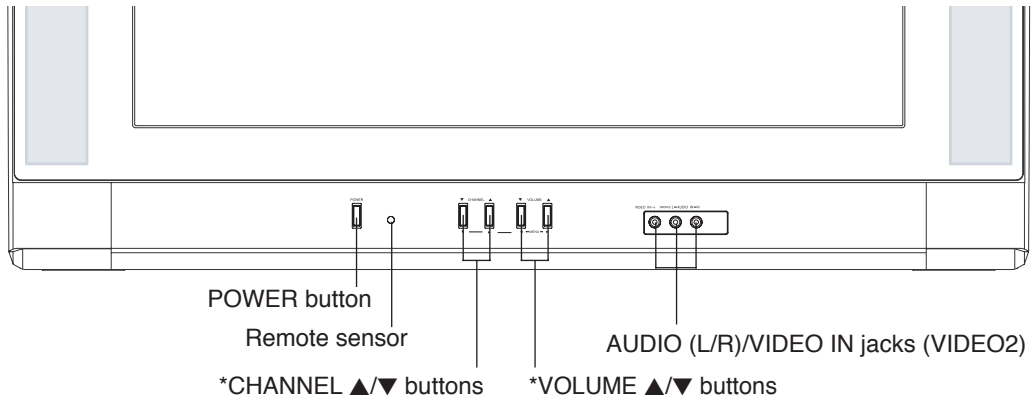(One blade is wider than the other)
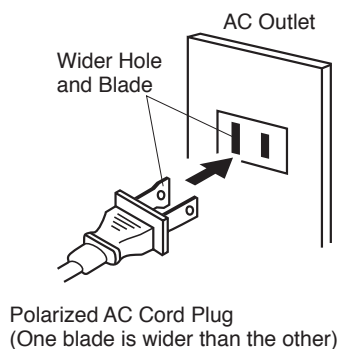
TO USE AC POWER SOURCE
Use the AC polarized line cord provided for operation on AC. Insert the AC cord plug into a standard 120V 60Hz polarized AC outlet.

NOTES:
- Never connect the AC line cord plug to other than the specified voltage (120V 60Hz). Use the attached power cord only.
- If the polarized AC cord does not fit into a non-polarized AC outlet, do not attempt to file or cut the blade. It is the user's responsibility to have an electrician replace the obsolete outlet.
- If you cause a static discharge when touching the unit and the unit fails to function, simply unplug the unit from the AC outlet and plug it back in. The unit should return to normal operation.

5

Parts and functions

Front

POWER button

Remote sensor

*CHANNEL ▲/▼ buttons

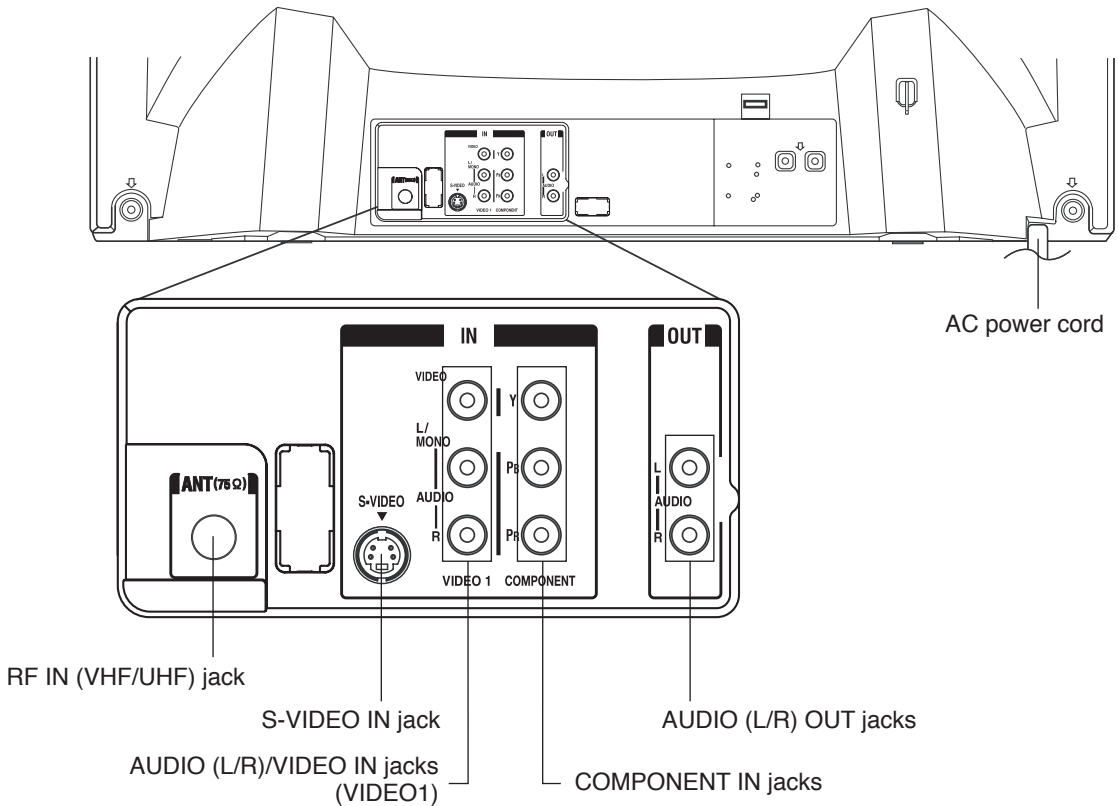AUDIO (L/R)/VIDEO IN jacks (VIDEO2)

*VOLUME ▲/▼ buttons
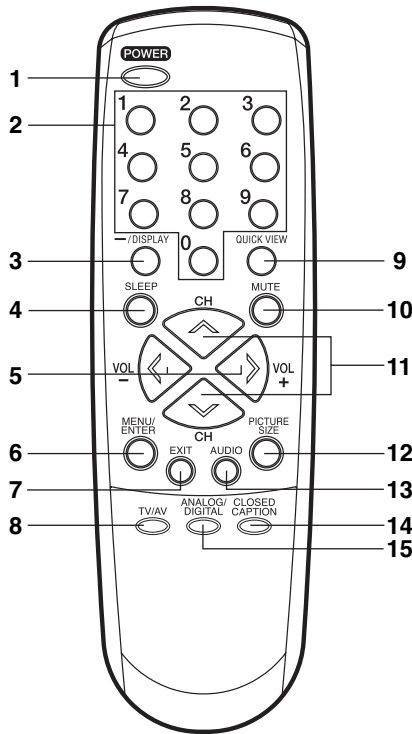
* To display the menu screen.
  Press both VOLUME ▲/▼ buttons at the same time to display the menu screen.
  CHANNEL ▲/▼ buttons and VOLUME ▲/▼ buttons can be used to select the desired setting during the menu screen operations.

Rear

AC power cord

RF IN (VHF/UHF) jack

S-VIDEO IN jack

AUDIO (L/R)/VIDEO IN jacks (VIDEO1)

AUDIO (L/R) OUT jacks

COMPONENT IN jacks

6

the display from the screen, press this button again. This button is also the "–" button used when selecting digital channels.

4. **SLEEP Button -** To set the TV to turn off after a preset amount of time, press the SLEEP button. The clock will count up 10 minutes each time the button is pressed in the order of 0, 10, 20, ...100, 110, 120. After the sleep time is programmed, the display will disappear then reappear momentarily every ten minutes to remind you the sleep timer function is operating. To confirm the sleep time setting, press the SLEEP button once and the remaining time will be momentarily displayed. To cancel sleep time, press the SLEEP button repeatedly until the display turns to 0.

5. **VOL (VOLUME) + / – Buttons -** Press the "+" button to increase, or the "–" button to decrease the volume level. Use to select the desired setting during the menu screen operation.

6. **MENU/ENTER Button -** Press to display the menu screen. While in the on-screen menu, press to enter or select options.

7. **EXIT Button -** Press to exit the menu screen.

8. **TV/AV Button -** Press this button to display SOURCE SELECTION menu to select the video input source.

9. **QUICK VIEW Button -** This button allows you to go back to the previous channel selected by pressing the QUICK VIEW button. Press this button again to return to the channel you were watching.

10. **MUTE Button -** To turn off the sound, press this button once. The TV will be silenced and the symbol "MUTE" will appear on the screen. The muting feature can be released by pressing the MUTE button again or one of the VOL + or – buttons.

11. **CH (CHANNEL) ⌃ / ⌄ Buttons -** Press the ⌃ button to change to a higher numbered channel set into memory. Press the ⌄ button to change to a lower numbered channel set into memory. Use to select the desired setting during the menu screen operation.

12. **PICTURE SIZE Button -** Press to change the picture size.

13. **AUDIO Button -** Press to select the desired audio setting.

14. **CLOSED CAPTION Button -** Press this button to display CLOSED CAPTION menu.

15. **ANALOG/DIGITAL Button -** Press to select analog/digital mode.

1. **POWER Button -** Press to turn the power on/off to the TV.
2. **Direct Channel Selection Buttons (0-9) -** Allow direct access to any channel.
3. **–/DISPLAY Button -** When the TV is receiving an analog signal pressing this button will display the current information on-screen. When the TV is receiving a digital signal, pressing this button once will display the digital information on-screen; pressing it a second time will display the analog information on-screen. To remove
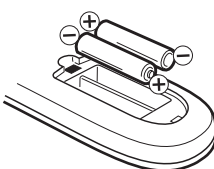
Before using the remote control, batteries must first be installed.

HOW TO INSTALL BATTERIES
1. Open the battery compartment cover.
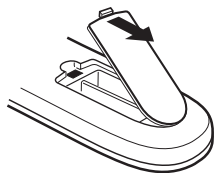
2. Install two "AAA" batteries.

3. Replace the battery compartment cover.

Use two "AAA" size batteries. The batteries may last approximately one year depending on how much the remote control is used. For best performance, it is recommended that batteries should be replaced on a yearly basis, or when the remote operation becomes erratic. Do not mix old and new batteries or different types.

BATTERY PRECAUTIONS
These precautions should be followed when using batteries in this device:
• Use only the size and type of batteries specified.
• Be sure to follow the correct polarity when installing the batteries as indicated in the battery compartment. Reversed batteries may cause damage to the device.
• Do not mix different types of batteries together (e.g. Alkaline and Carbon-zinc) or old batteries with fresh ones.
• If the device is not to be used for a long period of time, remove the batteries to prevent damage or injury from possible battery leakage.
• Do not try to recharge batteries not intended to be recharged; they can overheat and rupture (follow battery manufacturer's directions).

7

Antenna connections

If you are using an indoor or outdoor antenna, follow the instructions below that correspond to your antenna system. If you are using a cable TV service (CABLE), see page 9 for Cable TV connections.

Combination VHF/UHF Antenna (Single 75 ohm Cable or 300 ohm Twin-lead Wire)

RF IN jack

RF IN jack

75 ohm
Coaxial Cable

300-75 ohm
Matching Transformer
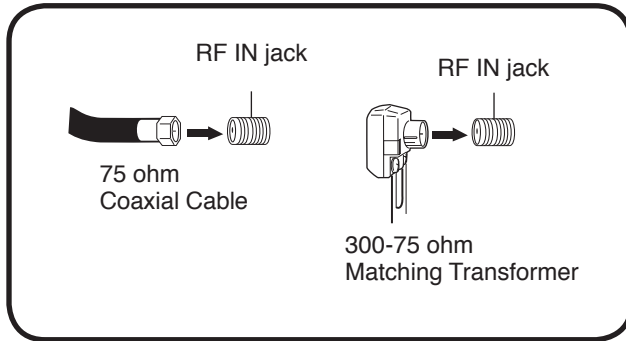
Connect the 75 ohm Cable from the Combination VHF/UHF Antenna to the RF IN Jack.

If your Combination VHF/UHF Antenna has a 300 ohm Twin-lead Wire, the use of the 300-75 ohm Matching Transformer may be necessary.

Combination VHF/UHF Antenna (Separate VHF and UHF 300 ohm Twin-lead Wires)

RF IN jack

300-75 ohm
Matching Transformer

Combiner

UHF 300 ohm
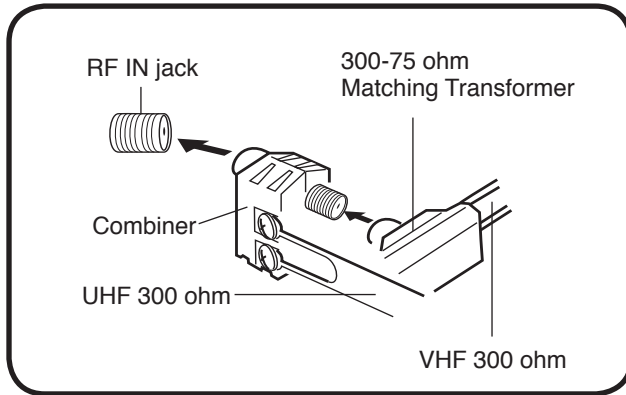
VHF 300 ohm

Connect the UHF 300 ohm Twin-lead Wire to the Combiner (not supplied). Connect the VHF 300 ohm Twin-lead Wire to the 300-75 ohm Matching Transformer. Attach the Transformer to the Combiner, then attach the Combiner to the RF IN Jack.

Separate VHF/UHF Antennas (75 ohm VHF Cable and 300 ohm UHF Twin-lead Wires)

RF IN jack

VHF 75 ohm

Combiner
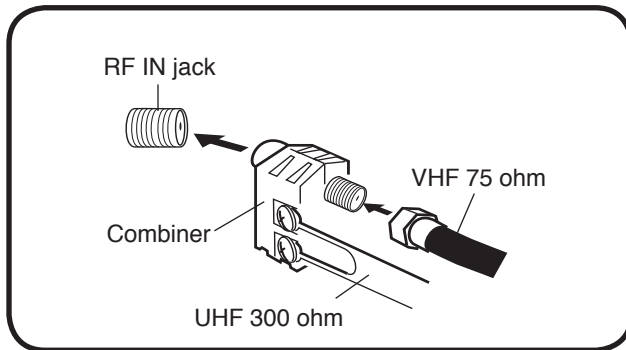
UHF 300 ohm

Connect the VHF 75 ohm cable and UHF 300 ohm Twin-lead Wire to the Combiner. Attach the Combiner to the RF IN Jack.

8

**This unit has an extended tuning range and can tune most cable channels without using a Cable TV Converter box. Some Cable TV companies offer "premium pay channels" in which the signal is scrambled. Descrambling these signals for normal viewing requires the use of a descrambler device which is generally provided by the Cable TV company.**

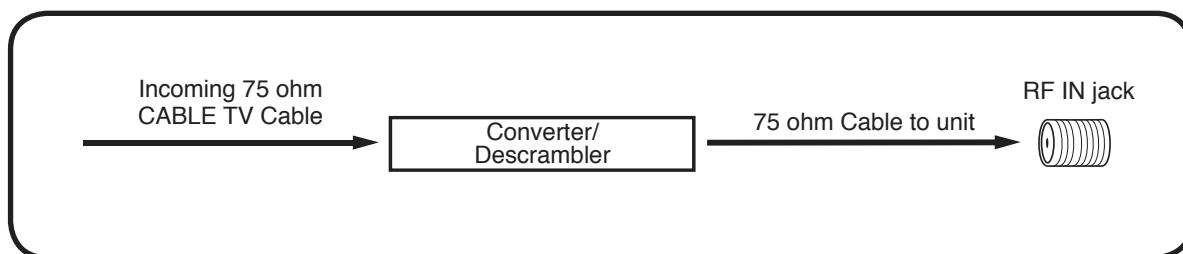## FOR SUBSCRIBERS TO BASIC CABLE TV SERVICE

RF IN jack

75 ohm
Coaxial Cable
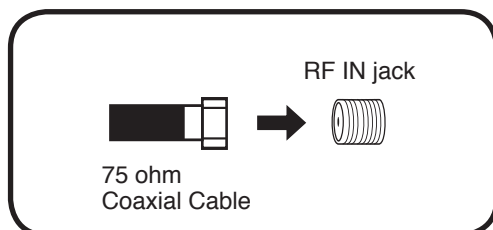
For basic cable service not requiring a Converter/Descrambler box, connect the 75 ohm Coaxial Cable directly to the RF IN Jack on the back of the unit.

FOR SUBSCRIBERS TO SCRAMBLED CABLE TV SERVICE

If you subscribe to a Cable TV service which requires the use of a Converter/Descrambler box, connect the incoming 75 ohm Coaxial Cable to the Converter/Descrambler box. Using another 75 ohm Coaxial Cable, connect the output jack of the Converter/Descrambler box to the RF IN Jack on the unit. Follow the connections shown below. Set the unit to the output channel of the Converter/Descrambler box (usually channel 3 or 4) and use the Converter/Descrambler box to select channels.

Incoming 75 ohm
CABLE TV Cable

Converter/
Descrambler

75 ohm Cable to unit

RF IN jack

FOR SUBSCRIBERS TO UNSCRAMBLED BASIC CABLE TV SERVICE WITH SCRAMBLED PREMIUM CHANNELS

If you subscribe to a Cable TV service in which basic channels are unscrambled and premium channels require the use of a Converter/Descrambler box, you may wish to use a signal Splitter and an A/B Switch box (available from the Cable TV company or an electronics supply store). Follow the connections shown below. With the switch in the "B" position, you can directly tune any nonscrambled channels on your unit. With the switch in the "A" position, tune your unit to the output of the Converter/Descrambler box (usually channel 3 or 4) and use the Converter/Descrambler box to tune scrambled channels.

Converter/
Descrambler

Incoming 75 ohm
CABLE TV Cable

Splitter

A/B Switch

A
B

75 ohm Cable
to unit

RF IN jack

9
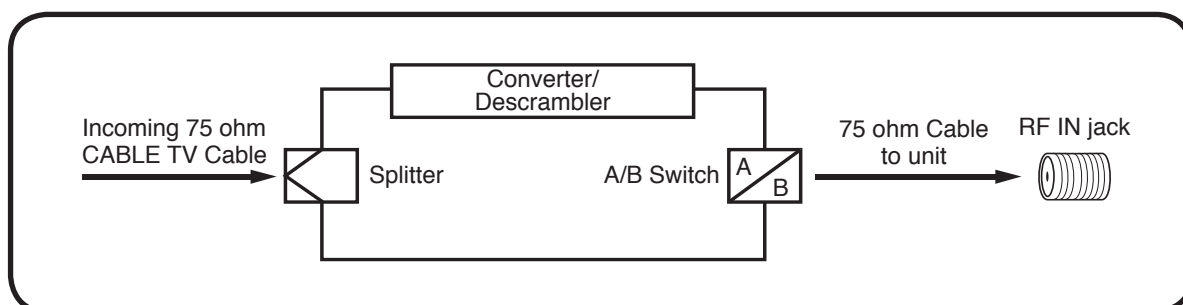
Connections to other equipment

The exact arrangement you use to interconnect various video and audio components to the TV is dependent on the model and features of each component. Check the Owner's Manual provided with each component for the location of video and audio inputs and outputs.
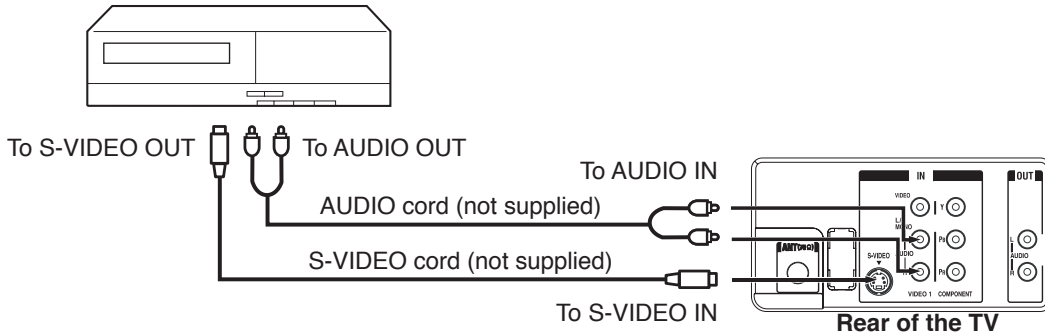
The connection diagrams below are offered as suggestions. You may need to modify them to accommodate your particular assortment of components. The diagrams are intended to show component video and audio interconnections only.

To connect the TV to a VCR

To AUDIO/VIDEO OUT

AUDIO/VIDEO cord (not supplied)

To AUDIO/VIDEO IN
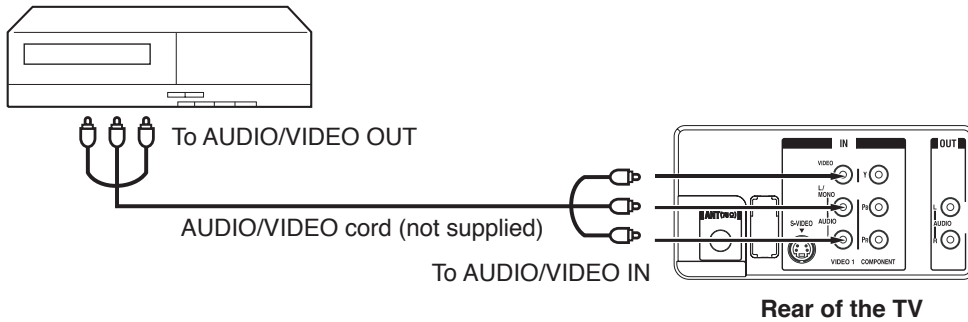
Rear of the TV

To connect the TV to a VCR with an S-Video cord

If you connect a VCR with a S-VIDEO cord to the S-VIDEO IN jack on the rear of the TV, you must also connect the audio cords to the AUDIO IN jacks on the rear of the TV. The S-VIDEO cord only carries the video signal. The audio signal is separate.
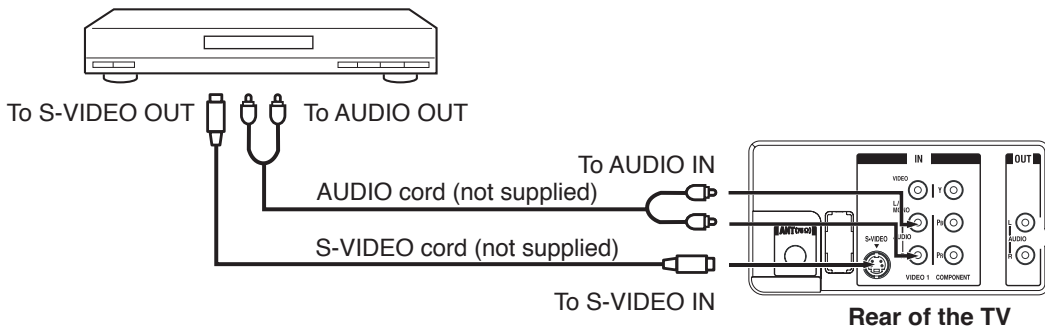
To S-VIDEO OUT   To AUDIO OUT

To AUDIO IN

AUDIO cord (not supplied)

S-VIDEO cord (not supplied)

To S-VIDEO IN   **Rear of the TV**

NOTE:
When the S-video cord and the video cord are connected to each jack at the same time, the S-video cord takes precedence over the video cord.

To connect the TV to a DVD player/Satellite receiver
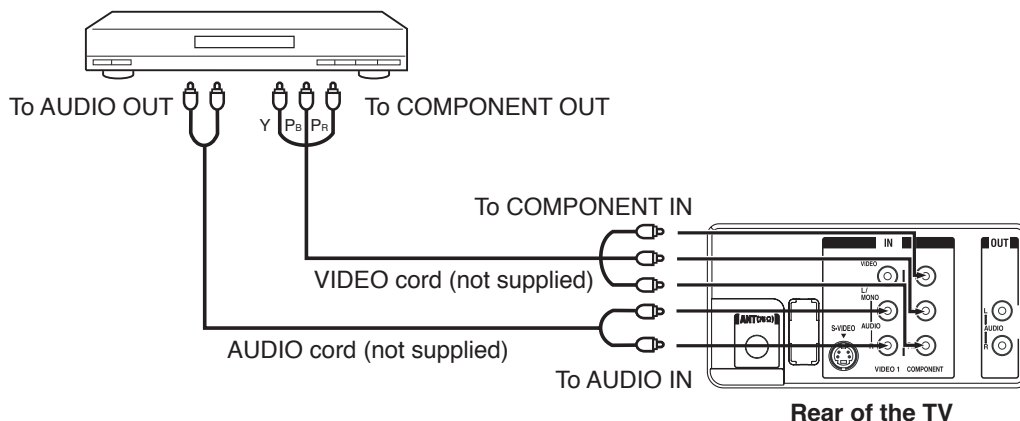
If your DVD player or Satellite receiver has a S-Video out jack, connect cords as shown.

To S-VIDEO OUT   To AUDIO OUT

To AUDIO IN

AUDIO cord (not supplied)

S-VIDEO cord (not supplied)

To S-VIDEO IN

Rear of the TV

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Connections to other equipment   (continued)

To connect the TV to a DVD player with component video
If your DVD player has component video out jacks, connect your TV to a DVD player using a component video cord. It can greatly enhance picture quality and performance.

To AUDIO OUT   To COMPONENT OUT

To COMPONENT IN

VIDEO cord (not supplied)

AUDIO cord (not supplied)
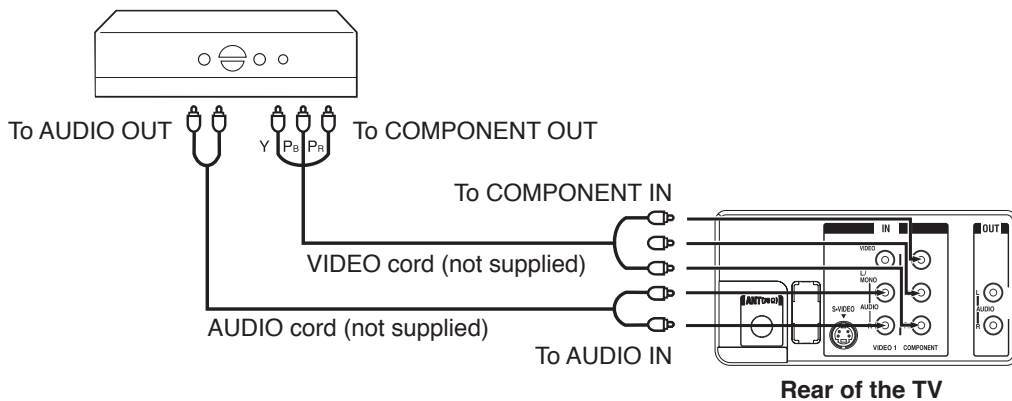
To AUDIO IN

Rear of the TV

NOTE:
This unit is only capable of displaying 480i interlaced signal when connected to a digital device with component video outputs. If you input a 480p, 720p or 1080i signal to the component video inputs, "COMPONENT" and "NO SIGNAL OR NOT SUPPORTED VIDEO RESOLUTION" will be displayed on a black screen. If this screen appears, set the digital device's component output to 480i.
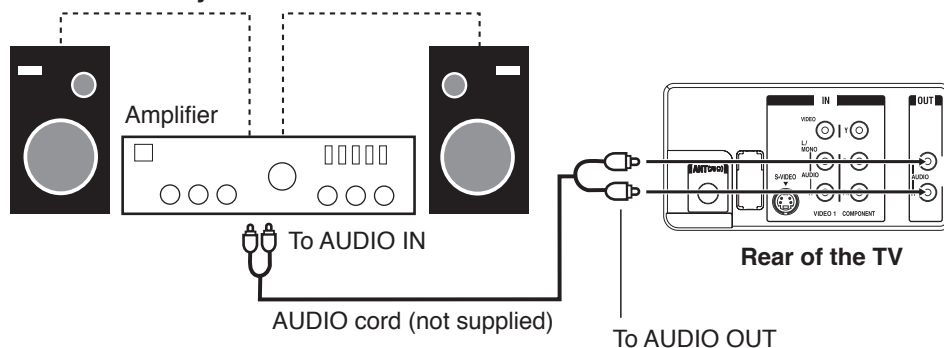
To connect the TV to a set-top box
If you connect a set-top box, connect your TV to it by using a component video cord.

To AUDIO OUT   To COMPONENT OUT

To COMPONENT IN

VIDEO cord (not supplied)

AUDIO cord (not supplied)

To AUDIO IN

Rear of the TV

NOTE:
This unit is only capable of displaying 480i interlaced signal when connected to a digital device with component video outputs. If you input a 480p, 720p or 1080i signal to the component video inputs, "COMPONENT" and "NO SIGNAL OR NOT SUPPORTED VIDEO RESOLUTION" will be displayed on a black screen. If this screen appears, set the digital device's component output to 480i.
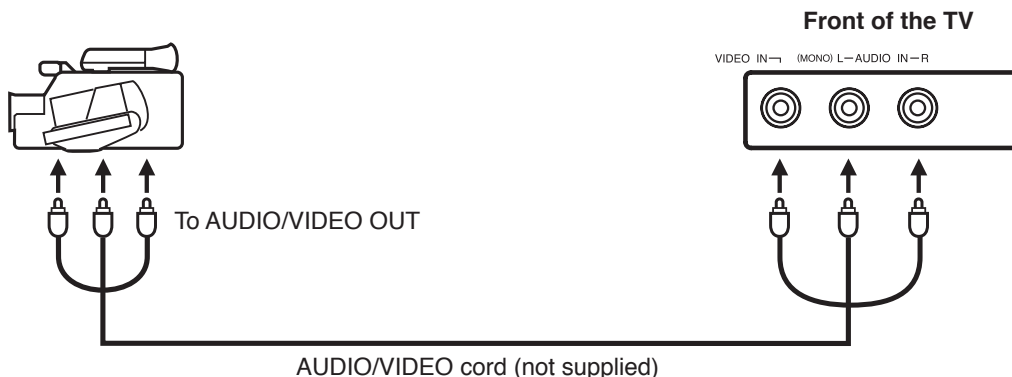
To connect an audio system

Amplifier

To AUDIO IN

Rear of the TV

AUDIO cord (not supplied)   To AUDIO OUT
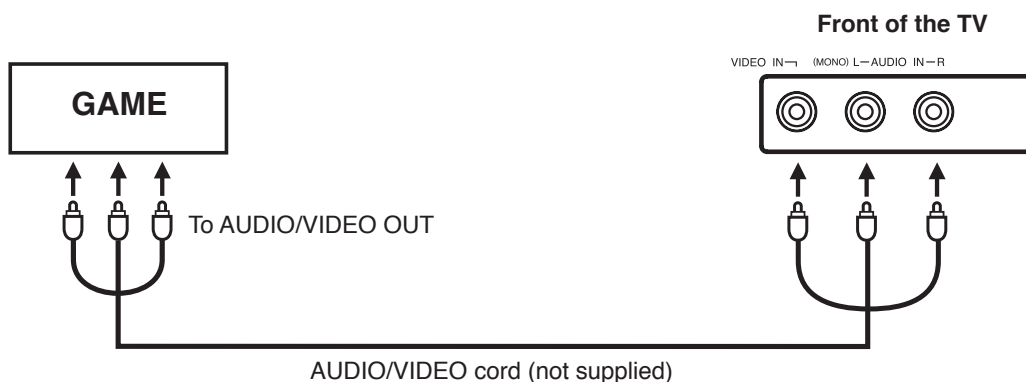
11

Connections to other equipment   (continued)

To connect the TV to a camcorder
To playback from a camcorder, connect the camcorder to the TV as shown.

Front of the TV

VIDEO IN   (MONO) L—AUDIO IN—R

To AUDIO/VIDEO OUT

AUDIO/VIDEO cord (not supplied)

To connect the TV to a Game
The TV can also be used as a display device for many video games. However, due to the wide variety of signals generated by these devices and subsequent hook-up variations required, they have not all been included in the suggested connection diagrams. You'll need to consult each component's Owner's Manual for additional information.
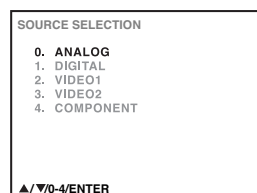
Front of the TV

VIDEO IN   (MONO) L—AUDIO IN—R

GAME

To AUDIO/VIDEO OUT

AUDIO/VIDEO cord (not supplied)

Selecting the VIDEO input source
Press **TV/AV** to view a signal from another device connected to your TV, such as a VCR or DVD player. You can select "ANALOG", "DIGITAL", "VIDEO1", "VIDEO2" (on the front panel), or "COMPONENT" depending on which input jacks you used to connect your devices.
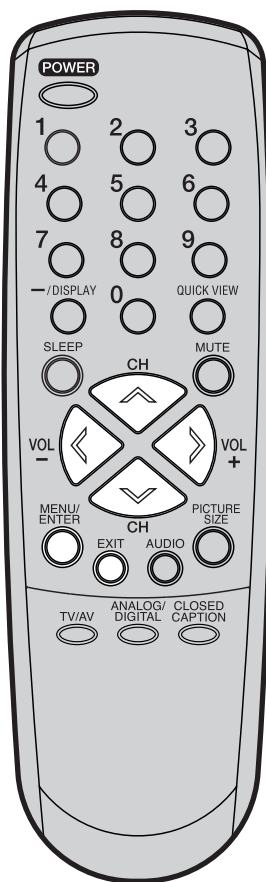
Pressing **TV/AV** on the remote control displays the current signal source.

Press ⋀ / ⋁ or the **number buttons (0-4)** to select desired mode.

```
SOURCE SELECTION
 0.  ANALOG
 1.  DIGITAL
 2.  VIDEO1
 3.  VIDEO2
 4.  COMPONENT


▲/▼/0-4/ENTER
```

12

Setting the language

You can choose from three different languages (English, Spanish and French) for the on-screen displays. On-screen language selection (step 4) will automatically appear on the screen when you press MENU/ENTER initially. Select the language you prefer first, then proceed with the other menu options.
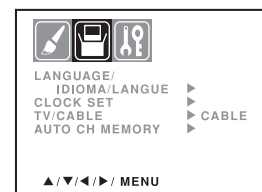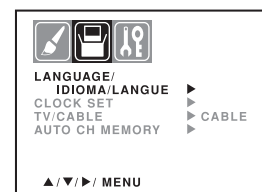
1 Press **MENU/ENTER**. The menu screen will appear.

2 Press ◁ or ▷ to select ▦ (SETUP) menu.

```
LANGUAGE/
    IDIOMA/LANGUE    ▶
CLOCK SET            ▶
TV/CABLE             ▶ CABLE
AUTO CH MEMORY       ▶

▲/▼/◀/▶/ MENU
```

3 Press ⌃ or ⌄ to select "LANGUAGE/IDIOMA/LANGUE". Then press ▷ to display the LANGUAGE/IDIOMA/LANGUE menu.

```
LANGUAGE/
    IDIOMA/LANGUE    ▶
CLOCK SET            ▶
TV/CABLE             ▶ CABLE
AUTO CH MEMORY       ▶

▲/▼/▶/ MENU
```

4 Press ⌃ or ⌄ to select the desired language: English (ENGLISH), Spanish (ESPAÑOL) or French (FRANÇAIS).

```
LANGUAGE/
    IDIOMA/LANGUE


    ENGLISH
    ESPAÑOL
    FRANÇAIS


▲/▼/ ENTER
```

5 Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.

NOTE:
If no buttons are pressed for more than 60 seconds, the MENU screen will return to normal TV-operation automatically.

13

Memorizing channels

This TV is equipped with a channel memory feature which allows channels to skip up or down to the next channel set into memory, skipping over unwanted channels. Before selecting channels, they must be programmed into the TV's memory. To use this TV with an antenna, set the TV/CABLE menu option to the TV mode. When shipped from the factory, this menu option is in the CABLE mode.

TV/CABLE selection

1 Press **MENU/ENTER**. The menu screen will appear.

2 Press ‹ or › to select 🔧 (SETUP) menu.

```
LANGUAGE/
   IDIOMA/LANGUE    ▶
CLOCK SET           ▶
TV/CABLE            ▶ CABLE
AUTO CH MEMORY      ▶

▲/▼/◀/▶/ MENU
```

3 Press ⌃ or ⌄ to select "TV/CABLE".

```
LANGUAGE/
   IDIOMA/LANGUE    ▶
CLOCK SET           ▶
TV/CABLE            ▶ CABLE
AUTO CH MEMORY      ▶

▲/▼/◀/▶/ MENU
```

4 Press ‹ or › to select "TV" or "CABLE".

| **TV** - VHF/UHF channels |
| **CABLE** - CABLE TV channels |

```
LANGUAGE/
   IDIOMA/LANGUE    ▶
CLOCK SET           ▶
TV/CABLE            ▶ TV
AUTO CH MEMORY      ▶

▲/▼/◀/▶/ MENU
```

5 Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.

NOTE:
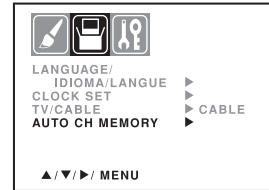It may take a few seconds for a digital channel picture to appear on screen after being selected.

CABLE CHART
The chart below is typical of many cable system channel allocations.

| Number on this TV | | | | | | | | | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
Corresponding CABLE channel									A	B	C	D	E	F	G	H	I
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
J	K	L	M	N	O	P	Q	R	S	T	U	V	W	AA	BB	CC	DD
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV
59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
WW	AAA	BBB	CCC	DDD	EEE	FFF	GGG	HHH	III	JJJ	KKK	LLL	MMM	NNN	OOO	PPP	QQQ
77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
RRR	SSS	TTT	UUU	VVV	WWW	XXX	YYY	ZZZ	86	87	88	89	90	91	92	93	94
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
A-5	A-4	A-3	A-2	A-1	100	101	102	103	104	105	106	107	108	109	110	111	112
113	114	115	116	117	118	119	120	121	122	123	124	125	01				
113	114	115	116	117	118	119	120	121	122	123	124	125	5A				

14

Memorizing channels   (continued)

Automatic memory tuning

1 Press **MENU/ENTER**. The menu screen will appear.

2 Press 〈 or 〉 to select ⬛ (SETUP) menu, then press 〈 or 〉 to select "AUTO CH MEMORY".

```
LANGUAGE/
    IDIOMA/LANGUE    ▶
CLOCK SET             ▶
TV/CABLE              ▶ CABLE
AUTO CH MEMORY        ▶

▲/▼/▶/ MENU
```

3 Press 〉. The TV will begin memorizing all the channels available in your area.
After finishing Analog Tuning, Digital Tuning starts automatically.

```
AUTO CH MEMORY
—ANALOG CH SEARCH—
    STOP MENU
```

• It may take from 15 minutes to 30 minutes to complete memorizing digital cable channels. Depending on the reception condition, a BAR display may not advance for several minutes.

To add or delete channels (ANALOG MODE)

1 Press **ANALOG/DIGITAL** to select the analog mode.

2 Press **MENU/ENTER.** The menu screen appears.

3 Press 〈 or 〉 to select ⬛ (OPTION) menu, then press 〈 or 〉 to select "ADD/DELETE".

```
ADD/DELETE           ▶
SAP                  ▶ OFF
CLOSED CAPTION       ▶
V-CHIP               ▶
AUTO SHUT OFF        ▶ OFF

▲/▼/▶/ MENU
```
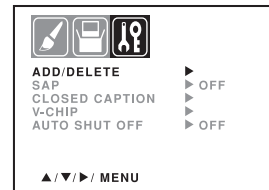
4 Press 〉. The ADD/DELETE menu appears.

5 Select the desired channel to be memorized or deleted using 〈 or 〉.

```
ADD/DELETE
  ANALOG
   ▲CH
   002           DELETE
   003           DELETE
   004           ADD
   005           DELETE
   ▼
▲/▼/◀/▶/ ENTER
```
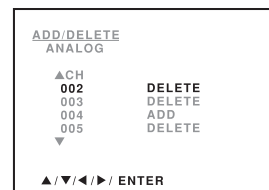
**6** Press 〈 or 〉 to select "ADD" or "DELETE".

7 Repeat steps 5-6 for other channels you want to add or delete.

**8** Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.

NOTES:
• Memorizing channels is best accomplished during evening "PRIMETIME" hours, as more stations are broadcasting digital signals. Memorizing channels can only be accomplished while a station is broadcasting a digital signal to set that channel into memory.
• If you are unsure of the digital channels available in your area you may visit www.antennaweb.org to receive a list based on your address or zip code.
• New digital channels may be added to your area periodically, it is recommended that you perform the "AUTO CH MEMORY" procedure regularly.

15

Memorizing channels   (continued)

To add or delete channels (DIGITAL MODE)

1 Press **ANALOG/DIGITAL** to select the digital mode.

2 Press **MENU/ENTER**. The menu screen appears.

3 Press ⟨ or ⟩ to select ⬚ (OPTION) menu, then press ∧ or ∨ to select "DIGITAL SETUP".

```
                    ⬚  💾  🔧
V-CHIP                      ▶
DIGITAL SETUP               ▶
AUTO SHUT OFF        ▶ OFF

      ▲/▼/▶/ MENU
```

4 Press ⟩. The DIGITAL SETUP menu appears.

```
DIGITAL SETUP
  ADD/DELETE
  CLOSED CAPTION
  CC SETTING
  CC ADVANCED
  AUDIO LANGUAGE




      ▲/▼/▶/ MENU
```

5 Press ∧ or ∨ to select "ADD/DELETE", then press ⟩. The ADD/DELETE menu appears.

```
DIGITAL SETUP
  ADD/DELETE
    ADDING CHANNEL
    ADD/DELETE




      ▲/▼/▶/ MENU
```

6 Press ∧ or ∨ to select "ADD/DELETE", then press ⟩.

```
DIGITAL SETUP
  ADD/DELETE
    ADD/DELETE
    ▲
      CH
      15-1       ADD
      15-2       ADD
      15-3       DELETE
      15-10      ADD
      15-99      DELETE
    ▼
      ▲/▼/◀/▶/ MENU
```

7 Select the desired channel to be memorized or deleted using ∧ or ∨.

8 Press ⟨ or ⟩ to select "ADD" or "DELETE".

9 Repeat steps 7-8 for other channels you want to add or delete.

10 Press **MENU/ENTER** repeatedly until the menu screen is cleared.
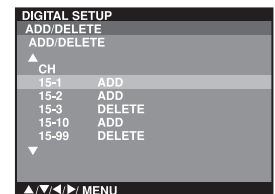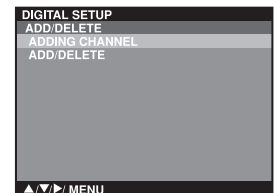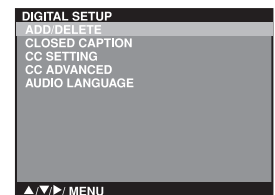
To add a digital channel you are watching
Select the digital channel you want to add. Press ∧ or ∨ to select "ADDING CHANNEL" as in step 6 above, then press ⟩.
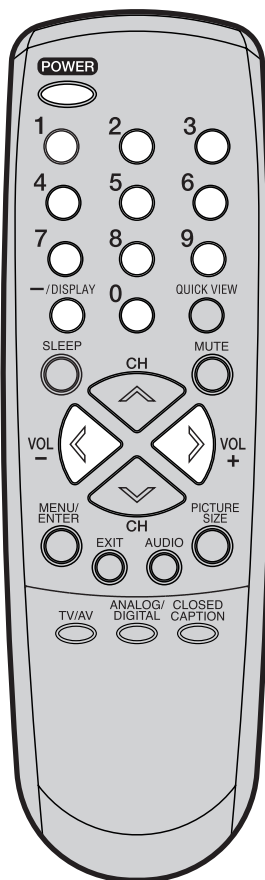
16

ENGLISH

1 To turn on the TV, press **POWER**.

2 Adjust the volume level by pressing **VOL + or –** . The volume level will be indicated on the screen by green bars. As the volume level increases, so do the number of bars. If the volume decreases, the number of green bars also decreases.

VOLUME   32

3 Set the **TV/CABLE** menu option to the appropriate position (see page 14).

TV   - VHF/UHF channels
CABLE - CABLE TV channels

4 Press the Direct Channel Selection buttons to select the channel.
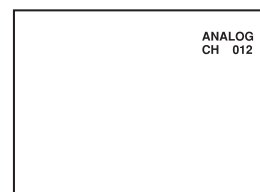
ANALOG
CH   012

To select analog channels
When the **TV/CABLE** menu option is in the TV position, all channels can be instantly selected by using two buttons. (For example, to select channel 2, press "0", then "2". If you press only "2", channel selection will be delayed for a few seconds.)
For channels 10 and above, press the 2 digits in order.

When the **TV/CABLE** menu option is in the CABLE position, channels can be selected as follows:

1-9:   Press **0** twice, then 1-9 as needed.
          Example, to select channel 2, press **002**.
10-12:   Press **0**, then remaining 2 digits.
          Example, to select channel 12, press **012**.
13-99:   Press the 2 digits in order.
          Example, to select channel 36, press **36**.
100-125: Press the 3 digits in order.
          Example, to select channel 120, press **120**.

To select digital channels
Press the channel number in order.

When "–" is contained in the channel number, press the first 3 digits, then press "**–/DISPLAY**", followed by the remaining 3 digits. (Example, to select channel 015-001, press **015 – 001**.)

• If a channel is selected with only audio content, "AUDIO ONLY" will be displayed on the screen.
• If a channel is selected with a weak digital signal, "DIGITAL CHANNEL SIGNAL STRENGTH IS LOW" will be displayed on the screen.
  If the digital channel has the same analog channel, you may be able to watch the same channel with analog.
• If a channel is selected to which you have not subscribed, "DIGITAL CHANNEL IS ENCRYPTED" will be displayed on the screen.

VHF/UHF/CABLE CHANNELS

TV	CABLE
VHF 2-13	VHF 2-13
UHF 14-69	STD/HRC/IRC 14-36 (A) (W) 37-59 (AA) (WW) 60-85 (AAA) (ZZZ) 86-94 (86) (94) 95-99 (A-5) (A-1) 100-125 (100) (125) 01 (5A)

NOTES:
• If a channel is selected that is not broadcasting, the sound will automatically be muted.
• If a station being viewed stops broadcasting, the TV will automatically shut itself off after 15 minutes.
• It may take a few seconds for a digital channel picture to appear on screen after being selected.

17
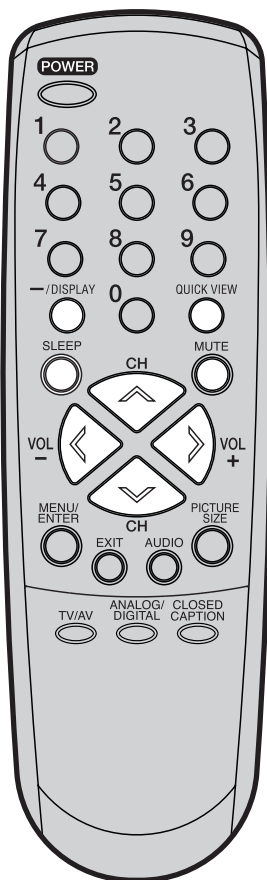
NOTE:
After 10 seconds, DISPLAY screen will return to normal TV-operation automatically, when a Digital signal is received.
After 4 seconds, DISPLAY screen will return to normal TV-operation automatically, when an Analog signal is received.

CH ⌃ / ⌄
Press and release **CH ⌃** or **⌄**.
The channel automatically stops at the next channel set into memory.
For proper operation, before selecting channels, they should be set into the memory. See pages 14 - 16 "Memorizing channels".

ANALOG
CH   012
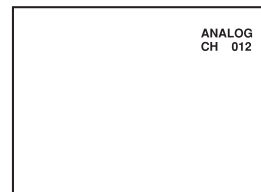
DISPLAY
Press **–/DISPLAY** to display the current information on the screen.
When the TV receives a digital signal, the digital information will appear.
• Broadcast program name
• Station name
• Audio language
• Program name
• V-CHIP RATING

HDTV_Moving_Picture_1080i_1   62-1
ENGLISH   CH-1
No Program Information is available
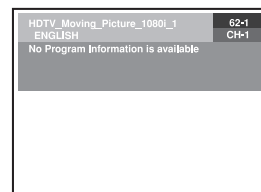
When the TV receives an Analog signal, press **–/DISPLAY** again, the analog information will appear.
• Clock
• Channel number or VIDEO mode selected
• Stereo or SAP (second audio program) audio status
• Picture size

12 : 00 AM   MON   ANALOG
STEREO SAP   CH   012
4 : 3
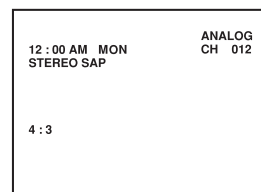
Press **–/DISPLAY** again to clear the call display.

QUICK VIEW
This button allows you to go back to the last channel selected by pressing **QUICK VIEW**. Press **QUICK VIEW** again to return to the original channel you were watching.

ANALOG
CH   012
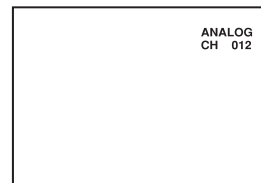
MUTE
Press **MUTE** to switch off the sound.
The unit's sound will be silenced and "MUTE" will appear on the screen.
The sound can be switched back on by pressing this button again or one of the **VOL +** or **–** buttons.

MUTE
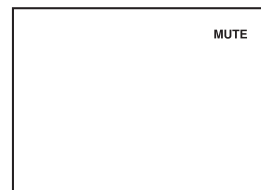
SLEEP
To set the unit to turn off after a preset amount of time, press **SLEEP** on the remote control.
The clock will count up 10 minutes for each press of the **SLEEP** button (0, 10, 20, ...100, 110, 120).
After the sleep time is programmed, the display will appear briefly every ten minutes to remind you that the sleep timer is operating.
To confirm the sleep timer setting, press **SLEEP** and the remaining time will be displayed for a few seconds. To cancel the sleep timer, press **SLEEP** repeatedly until the display turns to 0.

SLEEP
110

18
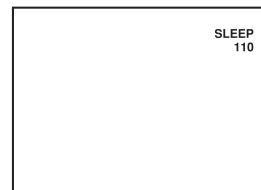
Setting the V-Chip

An age limitation can be set to restrict children from viewing or hearing violent scenes or pictures that you may choose to exclude. The restriction applies to "TV RATING" and "MOVIE RATING" if this data is transmitted.
You may set this restriction separately. To use the V-Chip function, you must register a password.

To set a password
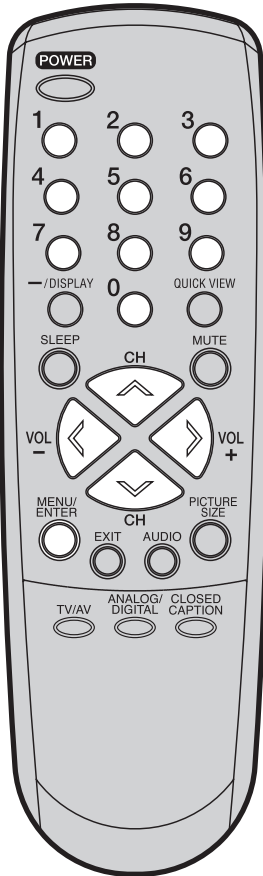
1 Press **MENU/ENTER**. The menu screen appears.

2 Press ⟨ or ⟩ to select ▦ (OPTION) menu, then press ⌃ or ⌄ to select "V-CHIP".

```
ADD/DELETE          ▶
SAP                 ▶ OFF
CLOSED CAPTION      ▶ OFF
V-CHIP              ▶
AUTO SHUT OFF       ▶ OFF

▲/▼/▶/ MENU
```

3 Press ⟩. The password entering screen appears.

```
V-CHIP SET

  NEW
  PASSWORD       :✳ – – –

0-9 / ENTER
```

4 Select and enter a password (4 digits) using the **number buttons (0-9)**, then press **MENU/ENTER**.

```
V-CHIP SET

  NEW
  PASSWORD       : ✳ ✳ ✳ ✳

0-9 / ENTER
```

"✳" appears instead of the number.

5 Enter the same password again to confirm, then press **MENU/ENTER**. The password is now set and the V-CHIP menu appears on the screen.

```
V-CHIP SET

  CONFIRM
  PASSWORD       :✳ – – –

0-9 / ENTER
```
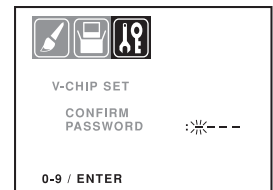
NOTES:
• If you forget the password, press and hold the volume down button on the TV while pressing and holding the 0 button on the remote. This will clear the password and prompt you for a new one.
• To avoid forgetting the password, write it down and keep it in a safe place.

Remote control buttons:
POWER
1 2 3
4 5 6
7 8 9
–/DISPLAY 0 QUICK VIEW
SLEEP MUTE
CH
VOL – VOL +
MENU/ENTER PICTURE SIZE
CH
EXIT AUDIO
TV/AV ANALOG/DIGITAL CLOSED CAPTION

19

To set the V-CHIP

1 Press **MENU/ENTER**. The menu screen appears.

2 Press ‹ or › to select ⬚ (OPTION) menu.

3 Press ⌃ or ⌄ to select "V-CHIP".

4 Press › to display the password entering mode. Use **number buttons (0-9)** to enter your password, then press **MENU/ENTER**. The V-CHIP menu appears.

5 Press ⌃ or ⌄ to select "V-CHIP SET", then press › . The V-CHIP SET menu appears.

6 Press ⌃ or ⌄ to select "TV RATING", then press ‹ or › to display the desired rating.

OFF	:	TV RATING is not set
TV-Y	:	All children
TV-Y7	:	7 years old and above
TV-G	:	General audience
TV-PG	:	Parental guidance
TV-14	:	14 years old and above
TV-MA	:	17 years old and above

· When you select TV-Y7, TV-PG, TV-14, or TV-MA, press **–/DISPLAY** to further define the rating.
   Press ⌃ or ⌄ to select the desired rating you want.
   Press ‹ or › to select the setting "ON" or "OFF".

7 Press ⌃ or ⌄ to select "MOVIE RATING", then press ›.
The RATING SET menu appears.

8 Press ⌃ or ⌄ to select the rating, then press ‹ or › to select "ON" or "OFF" for each rating.

G	:	All ages
PG	:	Parental guidance
PG-13	:	Parental guidance less than 13 years old
R	:	Under 17 years old parental guidance suggested
NC-17	:	17 years old and above
X	:	Adult only

9 Press **MENU/ENTER** twice to return to the V-CHIP menu, then press ⌃ or ⌄ to select "V-CHIP".

10 Press ‹ or › to select "ON". Your settings are now set into memory.

11 Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.
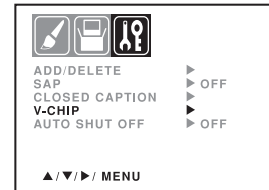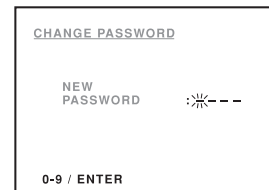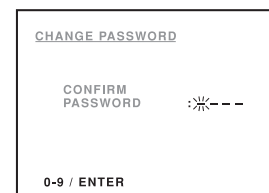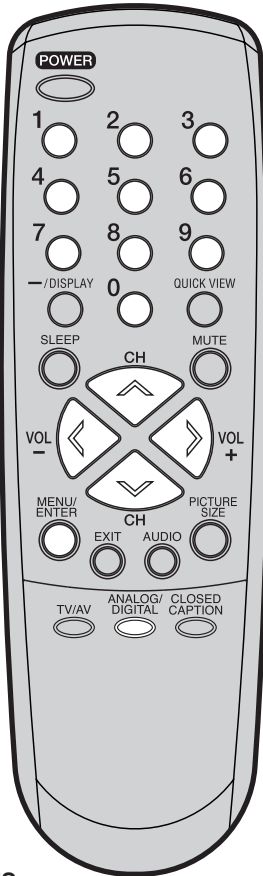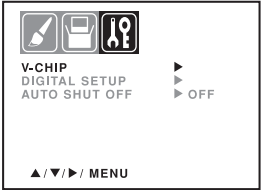
To use the TV after the TV is protected.
When a program is received that is blocked by the V-Chip, enter the password, then press **MENU/ENTER**. When the password is entered correctly the protection will be temporarily overridden.
If the TV is turned off, or the channel is changed the V-Chip restriction will be reactivated.

NOTES:
· The V-Chip function is activated only on programs and input sources that include a rating signal.
· The V-CHIP SET (DTV) will only be selectable when the unit receives a digital broadcast using the new rating system. It may take several minutes for the initial V-Chip Set-up to complete. At this time some stations are still developing this signal, in those cases the V-CHIP SET (DTV) will not function.

ADD/DELETE
SAP   OFF
CLOSED CAPTION
V-CHIP
AUTO SHUT OFF   OFF
▲/▼/▶/MENU

V-CHIP SET
   PASSWORD
0-9 / ENTER

V-CHIP
V-CHIP   OFF
V-CHIP SET
CHANGE PASSWORD
▲/▼/▶/MENU

V-CHIP SET
TV RATING   TV-Y7
MOVIE RATING
▲/▼/▶/MENU

RATING SET
G   OFF
PG   OFF
PG-13   OFF
R   OFF
NC-17   OFF
X   OFF
▲/▼/◀/▶/ ENTER

20

Setting the V-Chip   (continued)

To change the password

1 Press **MENU/ENTER**. The menu screen appears.

2 Press 〈 or 〉 to select 🔧 (OPTION) menu, then press ⌃ or ⌄ to select "V-CHIP".

```
ADD/DELETE             ▶
SAP                    ▶ OFF
CLOSED CAPTION         ▶
V-CHIP                 ▶
AUTO SHUT OFF          ▶ OFF


▲/▼/▶/ MENU
```

3 Press 〉 to display the password entering mode. Use the **number buttons (0-9)** to enter your password, then press **MENU/ENTER**.
The V-CHIP menu appears.

```
V-CHIP

V-CHIP                 ▶ OFF
V-CHIP SET             ▶
CHANGE PASSWORD        ▶


▲/▼/◀/▶/ MENU
```

4 Press ⌃ or ⌄ to select "CHANGE PASSWORD", then press 〉.

```
V-CHIP

V-CHIP                 ▶ OFF
V-CHIP SET             ▶
CHANGE PASSWORD        ▶


▲/▼/▶/MENU
```

5 Enter a new password using the **number buttons (0-9)**, then press **MENU/ENTER**.

```
CHANGE PASSWORD


     NEW
     PASSWORD       ⚙– – –


0-9 / ENTER
```

6 Enter the same password again to confirm, then press **MENU/ENTER**.

```
CHANGE PASSWORD


     CONFIRM
     PASSWORD       ⚙– – –


0-9 / ENTER
```

7 Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.
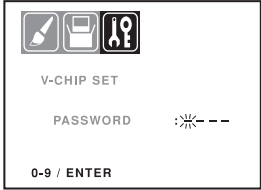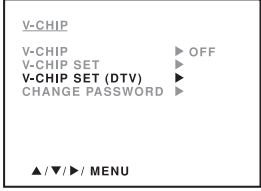
21

Downloading the additional V-Chip rating system

As a supplement to the standard V-Chip rating system, your television will be able to download an additional rating system, if such a system becomes available in the future.

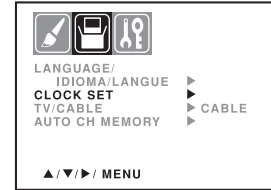### To download the additional V-Chip rating system (when available)

1 Press **ANALOG/DIGITAL** to select the digital mode.

2 Press **MENU/ENTER**, then press ⟨ or ⟩ to display ⊠ (OPTION) menu.

3 Press ⌃ or ⌄ to select "V-CHIP", then press ⟩.

```
V-CHIP                ▶
DIGITAL SETUP         ▶
AUTO SHUT OFF      ▶ OFF

▲ / ▼ / ▶ / MENU
```

4 Use the Channel **Number buttons (0-9)** to enter your password. Press **MENU/ENTER**. The V-CHIP menu appears.

```
V-CHIP SET

    PASSWORD       : ☀ – –

0-9 / ENTER
```

5 Press ⌃ or ⌄ to select "V-CHIP SET (DTV)", then press ⟩.

```
V-CHIP

V-CHIP              ▶ OFF
V-CHIP SET          ▶
V-CHIP SET (DTV)    ▶
CHANGE PASSWORD     ▶

▲ / ▼ / ▶ / MENU
```

6 If the TV is not storing the additional rating system, the TV will begin downloading it, which may take some time to be completed.

```
DIGITAL SETUP


        SEARCHING
        PLEASE WAIT



MENU
```

7 Press ⌃ or ⌄ to select "RRT SET", then press ⟩, and set your preferred content rating limits for the additional rating system.

```
DIGITAL SETUP
   V-CHIP SET (DTV)
     UPDATE
     RRT SET




▲/▼/▶/ MENU
```

NOTES

- You can only download the additional V-Chip rating system when your TV is receiving a digital signal.
- When you download the additional rating system, it may take some time for the download to occur.
- The V-Chip rating information and system are not determined or controlled by the TV .
- The standard V-Chip rating system is available whether your TV is receiving a digital signal or not, and will block both analog and digital programs. To set the restriction level using the standard V-Chip rating system, select **V-CHIP SET** in step 5.
- The downloadable V-Chip rating system is an evolving technology, and availability, content, and format may vary.
- You cannot select this feature if the TV is not receiving a digital signal for the current station.
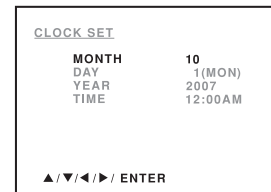
22

Setting the clock

EXAMPLE: Setting the clock to "8:30 AM", 28 th (SUN) October, 2007.

1 Press **MENU/ENTER**, then press ‹ or › to select ⊡ (SETUP) menu.

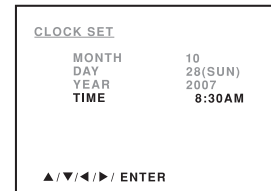**2** Press ⌃ or ⌄ to select "CLOCK SET". Then press › . The CLOCK SET menu will appear.

```
LANGUAGE/
    IDIOMA/LANGUE    ▶
CLOCK SET              ▶
TV/CABLE              ▶ CABLE
AUTO CH MEMORY        ▶

▲/▼/▶/ MENU
```

3 Press ‹ or › to set the MONTH, then press ⌄.

```
CLOCK SET

    MONTH          10
    DAY             1(MON)
    YEAR           2007
    TIME           12:00AM


▲/▼/◀/▶/ ENTER
```

4 Set the DAY, YEAR and TIME as in step 3.

After setting the date and time, the clock will begin functioning automatically.

```
CLOCK SET

    MONTH          10
    DAY            28(SUN)
    YEAR           2007
    TIME            8:30AM


▲/▼/◀/▶/ ENTER
```

5 Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.
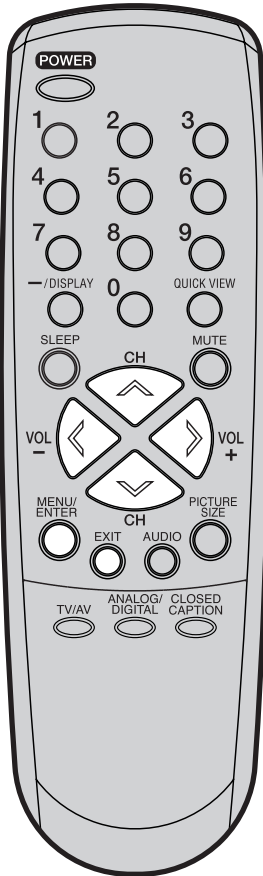
NOTE:
After a power failure or disconnection of the power, the clock settings will be lost. In this case, reset the present time.

23

Setting the picture size

**You can view 480i format programs in three picture sizes—4:3, 16:9 and ZOOM.**
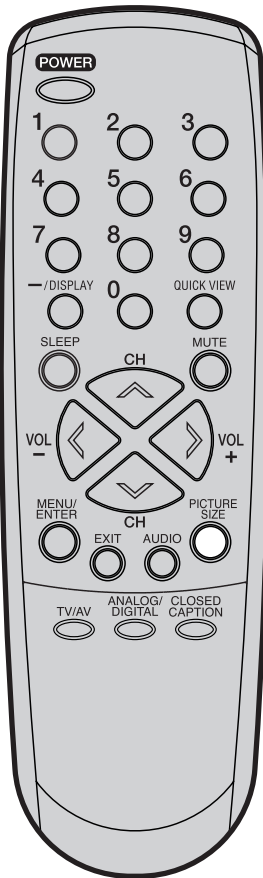
Selecting the picture size

You can change the picture size by pressing the **PICTURE SIZE** button on the remote control.

- If receiving an Analog signal, you can choose 4:3 or 16:9 picture size.
- If you are receiving a Digital signal in the 4:3 format, you are restricted to the 4:3 picture size.
- It receiving a Digital signal of 16:9, you can choose 16:9 or ZOOM.

4:3 picture size

To fill the screen, the top and bottom edges are extended more widely though the center of the picture remains near former ratio.
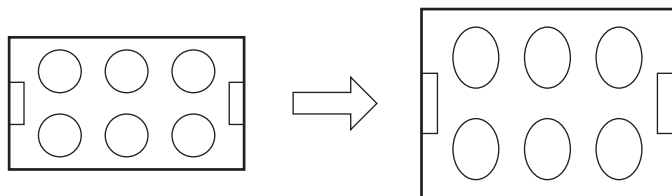
- If receiving a 4:3 format program, the image is displayed its originally formatted proportion.

16:9 picture size

This image will display the size of standard 16:9 with black bars at the top and bottom.
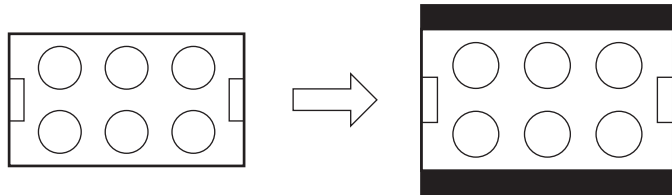
- If receiving a 4:3 format program, the image is displayed with black bars at the top and bottom and stretched wider.

NOTE:

If a fixed black bar remains on the screen for long periods of time, the image can become permanently engrained in the screen and cause subtle but permanent ghost images. Never leave your TV on for an extended period of time while displaying a stationary image(s).

ZOOM picture size (for 16:9 format programs)

The entire picture is uniformly enlarged—it is stretched the same amount both wider and taller (retains its original proportion). The right and left edges of the picture may be hidden.
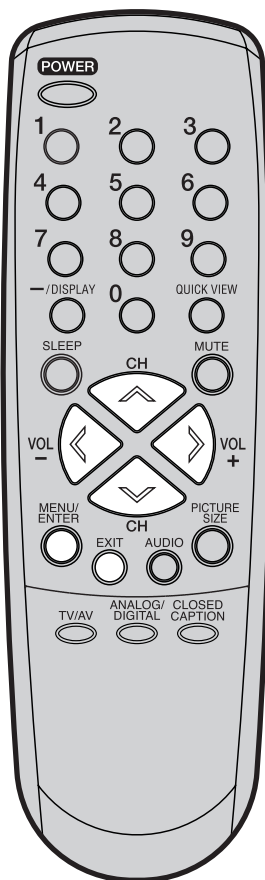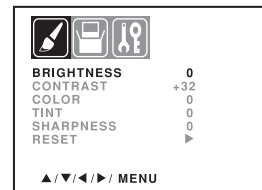

24
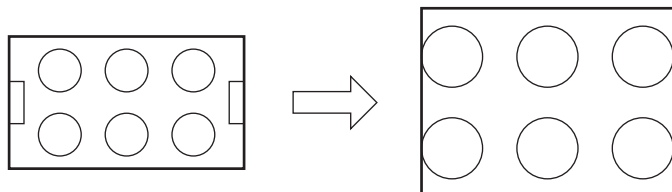
Picture control adjustment/Resetting your picture adjustment

Picture control adjustment

1 Press **MENU/ENTER**, then press
‹ or › to select (PICTURE)
menu.

```
BRIGHTNESS      0
CONTRAST       +32
COLOR           0
TINT            0
SHARPNESS       0
RESET          ▶

▲/▼/◀/▶/ MENU
```

2 Press or to select the item
you want to adjust.
Press ‹ or › to adjust the setting.

```
BRIGHTNESS      0
CONTRAST       +32
COLOR           0
TINT            0
SHARPNESS       0
RESET          ▶

▲/▼/◀/▶/ MENU
```

	‹	›
BRIGHTNESS	decrease brightness	increase brightness
CONTRAST	decrease contrast	increase contrast
COLOR	paler color	brilliant color
TINT	reddish color tint	greenish color tint
SHARPNESS	makes picture softer	makes picture clearer

3 After you have made your selection, press **EXIT** to return to the
normal screen.

NOTE:
The CONTRAST default setting is set to maximum at the factory.

Resetting your picture adjustment
The RESET function returns your picture quality adjustments to the
following factory settings:

BRIGHTNESS .... CENTER (0)   TINT..................... CENTER (0)
CONTRAST................... MAX (32)   SHARPNESS ...... CENTER (0)
COLOR..................... CENTER (0)

1 Press **MENU/ENTER**, then press
‹ or › to select (PICTURE) menu.

```
BRIGHTNESS      0
CONTRAST       +32
COLOR           0
TINT            0
SHARPNESS       0
RESET          ▶

▲/▼/▶/ MENU
```

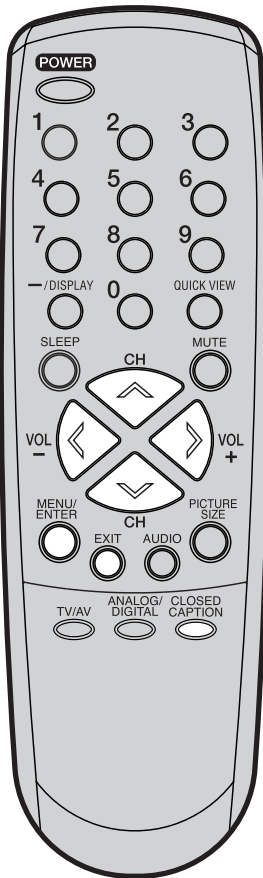**2** Press or to select "RESET", then press ›.

25

Closed Caption

WHAT IS CLOSED CAPTIONING?

This television has the capability to decode and display Closed Captioned television programs. Closed Captioning will display text on the screen for hearing impaired viewers or it will translate and display text in another language.

Captions: This Closed Caption Mode will display text on the screen in English or another language. Generally, Closed Captions in English are transmitted on C1 and Closed Captions in other languages are transmitted on C2.

Text: The Text Closed Caption Mode will usually fill 1/2 of the screen with a programming schedule or other information.

To turn on closed captions (ANALOG MODE)

1 Tune the television to the desired program in the analog mode.

2 Press **MENU/ENTER**, then press ◁ or ▷ to display 🛠 (OPTION) menu.

3 Press ∧ or ∨ to select "CLOSED CAPTION".

4 Press ▷. The CLOSED CAPTION menu appears.

NOTES:
• Depending on the broadcast signal, some analog captions function with a digital broadcast signal.
• This screen can be displayed by pressing **CLOSED CAPTION**.

```
ADD/DELETE           ▶
SAP                  ▶ OFF
CLOSED CAPTION       ▶
V-CHIP               ▶
AUTO SHUT OFF        ▶ OFF

     ▲/▼/▶/ MENU
```

```
CLOSED CAPTION

     C1
     C2
     T1
     T2
     OFF


     ▲/▼/ ENTER
```

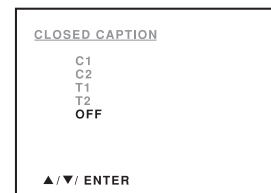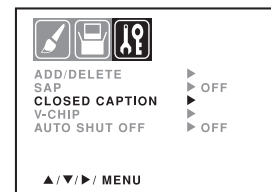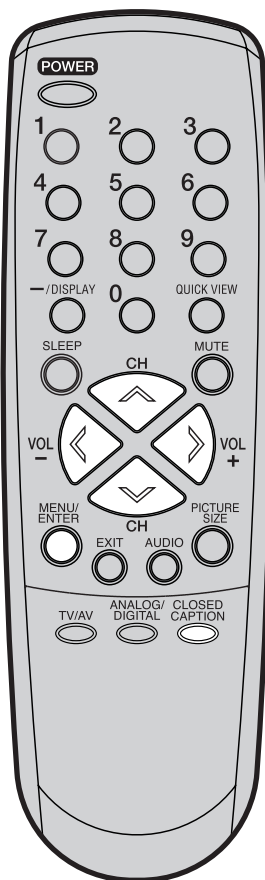**5** Press ∧ or ∨ to select the desired closed caption mode, then press **MENU/ENTER**.

NOTES:
• To view captions, select C1 or C2 (C1 displays translation of the primary language in your area). If the program or video you selected is not closed captioned, no captions will display on-screen.
• To view text, select T1 or T2. If text is not available in your viewing area, a black rectangle may appear on-screen. If this happens, set the Closed Caption feature to **OFF**.

6 Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.

NOTES:
• If the program or video you selected is not closed-captioned, no captions will display on-screen.
• If text is not available in your viewing area, a black rectangle may appear on-screen. If this happens, set the Closed Caption feature to "OFF".
• When selecting Closed Captions, the captioning will be delayed approx. 10 seconds.
• If no caption signal is received, no captions will appear, but the television will remain in the Caption Mode.
• Misspellings or unusual characters may occasionally appear during Closed Captioning. This is normal with Closed Captioning, especially with live programs. This is because during live programs, captions are also entered live. These transmissions do not allow time for editing.
• When Captions are being displayed, on-screen displays, such as volume and mute may be seen but may interfere with Closed Captions.
• Some Cable TV systems and copy protection systems may interfere with the Closed Captioned signal.
• If using an indoor antenna or if TV reception is very poor, the Closed Caption Decoder may not appear or may appear with strange characters or misspelled words. In this case, adjust the antenna for better reception or use an outdoor antenna.
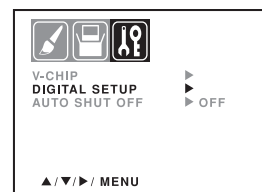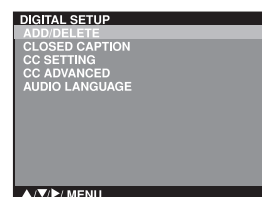
26

Closed Caption (continued)

To turn on closed captions (DIGITAL MODE)

1 Tune the television to the desired program in the digital mode.

2 Press **MENU/ENTER**. The menu screen appears.

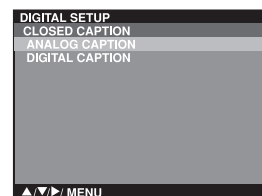**3** Press ⟨ or ⟩ to select [OPTION] menu, then press ∧ or ∨ to select "DIGITAL SETUP".

```
V-CHIP              ▶
DIGITAL SETUP       ▶
AUTO SHUT OFF       ▶ OFF

▲/▼/▶/ MENU
```

4 Press ⟩. The DIGITAL SETUP menu appears.

```
DIGITAL SETUP
ADD/DELETE
CLOSED CAPTION
CC SETTING
CC ADVANCED
AUDIO LANGUAGE



▲/▼/▶/ MENU
```

**5** Press ∧ or ∨ to select "CLOSED CAPTION", then press ⟩. The CLOSED CAPTION menu appears.

• This screen can be displayed by pressing **CLOSED CAPTION**.

6 Press ∧ or ∨ to select "ANALOG CAPTION" or "DIGITAL CAPTION", then press ⟩.

```
DIGITAL SETUP
CLOSED CAPTION
  ANALOG CAPTION
  DIGITAL CAPTION




▲/▼/▶/ MENU
```

7 Press ∧ or ∨ to select the desired closed caption mode.

```
DIGITAL SETUP
CLOSED CAPTION
  ANALOG CAPTION
  C1
  C2
  T1
  T2
  OFF

▲/▼/ MENU
```
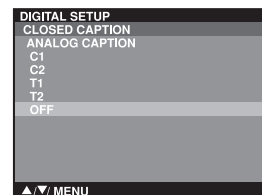
8 Press **MENU/ENTER** repeatedly until the menu screen is cleared.

Adjusting closed captioning
Closed captions are factory preset. However you can adjust them individually. This feature is designed to customize digital captions only.

NOTE:
To turn the closed caption feature off, select **OFF** in step 7, above.

CC Setting (DIGITAL MODE)

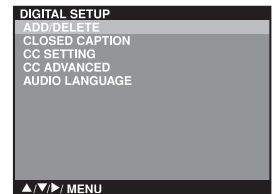**You can select the display method of Closed Caption with AUTO designated by broadcasting studios or CUSTOM.**
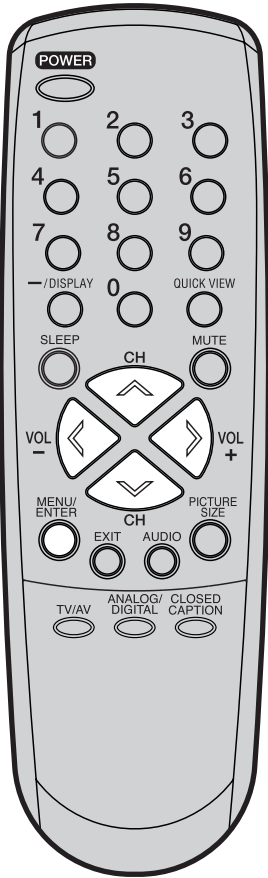
1 Tune the television to the desired program in the digital mode.

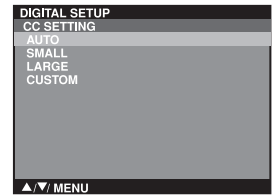**2** Press **MENU/ENTER**. The menu screen appears.

3 Press ⟨ or ⟩ to select ⬚ (OPTION) menu, then press ⋀ or ⋁ to select "DIGITAL SETUP".

```
V-CHIP              ▶
DIGITAL SETUP       ▶
AUTO SHUT OFF       ▶ OFF

▲/▼/▶/ MENU
```

4 Press ⟩. The DIGITAL SETUP menu appears.

```
DIGITAL SETUP
ADD/DELETE
CLOSED CAPTION
CC SETTING
CC ADVANCED
AUDIO LANGUAGE




▲/▼/▶/ MENU
```

5 Press ⋀ or ⋁ to select CC SETTING and press ⟩. The SETTING menu appears.

```
DIGITAL SETUP
CC SETTING
AUTO
SMALL
LARGE
CUSTOM



▲/▼/ MENU
```
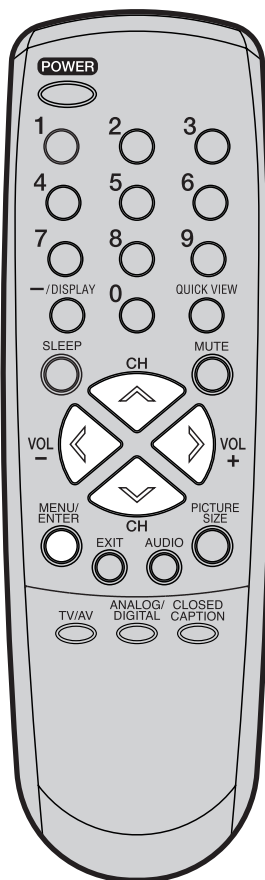
6 You can choose from AUTO, SMALL, LARGE, CUSTOM, and press **MENU/ENTER**.

7 Press **MENU/ENTER** repeatedly until the menu screen is cleared.

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ENGLISH

When you have selected CUSTOM as the display method, you can adjust the various setting listed below as follows:


NOTES:
• Do not set the Closed Caption "TEXT COLOR" and "BACKGROUND COLOR" as the same color or you will not be able to see the text.
• Do not set both the "TEXT OPACITY" and the "BACKGROUND OPACITY" to "TRANSPARENT" or you will not be able to see the text.

This feature is designed to customize Digital Captions only.

1 Tune the television to the desired program in the digital mode.

2 Press **MENU/ENTER**. The menu screen appears.

3 Press ◁ or ▷ to select 🔧 (OPTION) menu, then press ⌃ or ⌄ to select "DIGITAL SETUP".

```
V-CHIP              ▶
DIGITAL SETUP       ▶
AUTO SHUT OFF       ▶ OFF

▲/▼/▶/ MENU
```

4 Press ▷. The DIGITAL SETUP menu appears.

```
DIGITAL SETUP
 ADD/DELETE
 CLOSED CAPTION
 CC SETTING
 CC ADVANCED
 AUDIO LANGUAGE



▲/▼/▶/ MENU
```

5 Press ⌃ or ⌄ to select "CC ADVANCED", then press ▷.
The CC ADVANCED menu appears.

```
DIGITAL SETUP
 CC ADVANCED
  TEXT SIZE
  TEXT TYPE
  TEXT EDGE
  TEXT COLOR
  EDGE COLOR
  BACKGROUND COLOR
  TEXT OPACITY
  BACKGROUND OPACITY

▲/▼/▶/ MENU
```

6 Press ⌃ or ⌄ to select the item you want to adjust, then press ▷.

**7** Press ⌃ or ⌄ to select the setting, then press **MENU/ENTER**.
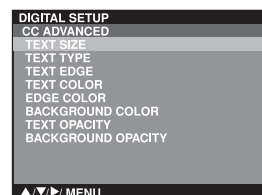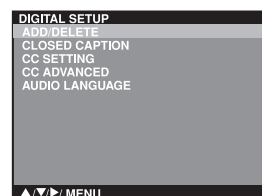
You can select from among the following items and parameters.

TEXT SIZE : SMALL, STANDARD, LARGE
TEXT TYPE : DEFAULT, STYLE 1, STYLE 2, STYLE 3, STYLE 4, STYLE 5, STYLE 6, STYLE 7
TEXT EDGE : NONE, RAISED, DEPRESSED, OUTLINE, LEFT SHADOW, RIGHT SHADOW
TEXT COLOR : BLACK, WHITE, GREEN, BLUE, CYAN, RED, MAGENTA, YELLOW
EDGE COLOR : BLACK, WHITE, GREEN, BLUE, CYAN, RED, MAGENTA, YELLOW
BACKGROUND COLOR : BLACK, WHITE, GREEN, BLUE, CYAN, RED, MAGENTA, YELLOW
TEXT OPACITY : AUTO, TRANSPARENT, TRANSLUCENT, SOLID, FLASHING
BACKGROUND OPACITY : AUTO, TRANSPARENT, TRANSLUCENT, SOLID, FLASHING

8 Press **MENU/ENTER** repeatedly until the menu screen is cleared.

29

Selecting Stereo/Second Audio Program (SAP)
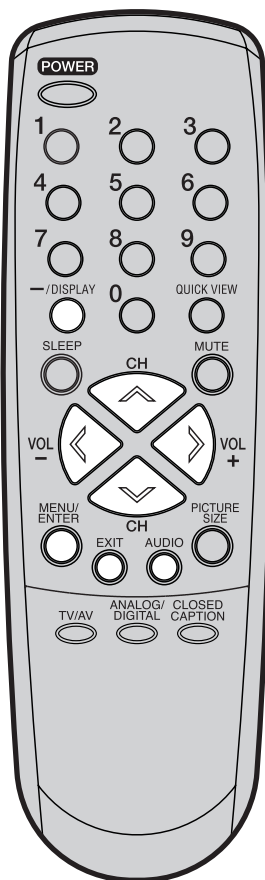
Selecting Stereo/Second Audio Program (SAP)

The multi-channel TV sound (MTS) feature provides high-fidelity stereo sound. MTS also can transmit a second audio program (SAP) containing a second language or other audio information.
When the TV receives a stereo or SAP broadcast, the word "STEREO" or "SAP" displays on-screen every time you turn the TV on, change the channel, or press **–/DISPLAY**.

To set the SAP

1 Press **MENU/ENTER** in the analog mode, then press 〈 or 〉 to display 🔊 (OPTION) menu.

```
ADD/DELETE           ▶
SAP                  ▶ OFF
CLOSED CAPTION       ▶
V-CHIP               ▶
AUTO SHUT OFF        ▶ OFF

▲/▼/◀/▶/ MENU
```

2 Press ⌃ or ⌄ to select "SAP", then press 〈 or 〉 to select "ON" or "OFF".

3 Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.
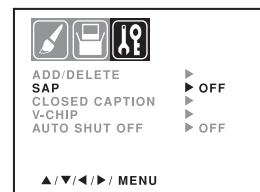
To listen to stereo sound

When the TV is turned on or a channel selection is made, the STEREO will appear on the screen. This means that Stereo broadcasting is available. You can enjoy stereo sound from the left and right speakers.
• When mono broadcasting is received, no indication is displayed.
• If the broadcasting signal is not strong enough or clear stereo sound is not available, press **AUDIO** to change to mono sound. The noise should be eliminated. Press it again to return to the stereo sound.

To listen to second audio program (SAP)

When the TV is turned on or a channel selection is made, SAP will appear on the screen. This means that the Second Audio Program broadcasting is available.

POWER

1 2 3
4 5 6
7 8 9
–/DISPLAY 0 QUICK VIEW
SLEEP MUTE
CH
VOL – VOL +
MENU/ENTER CH PICTURE SIZE
EXIT AUDIO
TV/AV ANALOG/DIGITAL CLOSED CAPTION

Selecting the audio language (DIGITAL MODE)
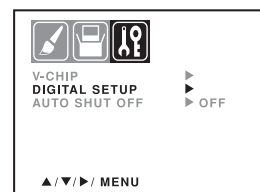
Selecting the audio language (DIGITAL MODE)
When two or more audio languages are included in a digital signal, you can select one of the audio language.
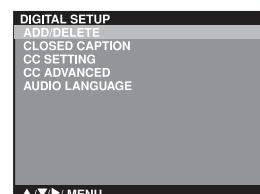
To select the audio language

1 Tune the television to the desired program in the digital mode.

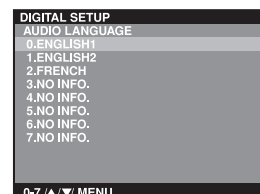**2** Press **MENU/ENTER**. The menu screen appears.

3 Press ⟨ or ⟩ to select [⚙] (OPTION) menu, then press ⋀ or ⋁ to select "DIGITAL SETUP".

```
V-CHIP              ▶
DIGITAL SETUP       ▶
AUTO SHUT OFF       ▶ OFF

▲/▼/▶/ MENU
```

4 Press ⟩. The DIGITAL SETUP menu appears.

```
DIGITAL SETUP
ADD/DELETE
CLOSED CAPTION
CC SETTING
CC ADVANCED
AUDIO LANGUAGE



▲/▼/▶/ MENU
```

5 Press ⋀ or ⋁ to select "AUDIO LANGUAGE", then press ⟩ to display the AUDIO LANGUAGE menu.

```
DIGITAL SETUP
AUDIO LANGUAGE
0.ENGLISH1
1.ENGLISH2
2.FRENCH
3.NO INFO.
4.NO INFO.
5.NO INFO.
6.NO INFO.
7.NO INFO.

0-7 /▲/▼/ MENU
```

6 Press ⋀ / ⋁ or the **number buttons (0-7)** to select your desired language, then press **MENU/ENTER**.

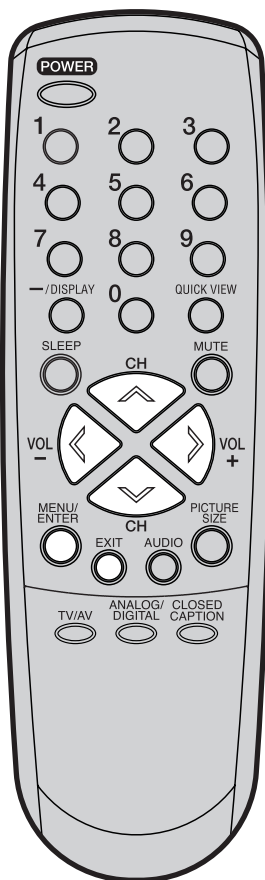**7** Press **MENU/ENTER** repeatedly until the menu screen is cleared.
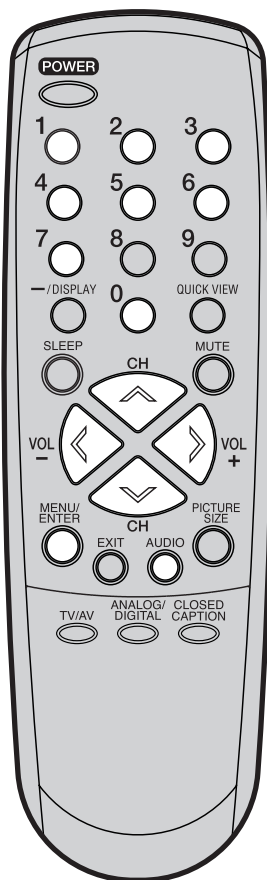
NOTE:
You can also display the AUDIO LANGUAGE menu by pressing "**AUDIO**" on the remote control.
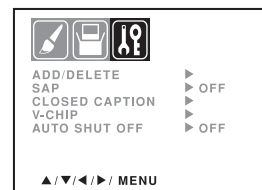
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Using the auto shut off feature

If the AUTO SHUT OFF feature is ON, and a station being viewed stops broadcasting, the TV will automatically shut itself off after 15 minutes.

To use the auto shut off feature

1 Press **MENU/ENTER.** The Menu screen will appears.

2 Press ‹ or › to display ⚙ (OPTION) menu.

```
ADD/DELETE          ▶
SAP                 ▶ OFF
CLOSED CAPTION      ▶
V-CHIP              ▶
AUTO SHUT OFF       ▶ OFF

▲/▼/◀/▶/ MENU
```

3 Press ⌃ or ⌄ to highlight "AUTO SHUT OFF", then press ‹ or › to select "ON" or "OFF".

```
ADD/DELETE          ▶
SAP                 ▶ OFF
CLOSED CAPTION      ▶
V-CHIP              ▶
AUTO SHUT OFF       ▶ ON

▲/▼/◀/▶/ MENU
```
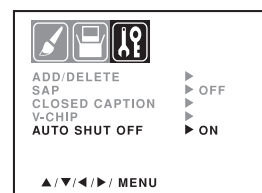
4 Press **MENU/ENTER** repeatedly until the menu screen is cleared. Otherwise, press **EXIT** to return to the normal screen immediately.

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Use the following check list for troubleshooting when you have problems with your TV. Consult your local dealer or service outlet if problems persist. Be sure all connections are properly made when using with other units.

SYMPTOMS	POSSIBLE SOLUTIONS
TV does not operate.	• Make sure the power cord is plugged in. • Try another AC outlet. • Power is off, check fuse or circuit breaker. • Unplug unit for an hour, then plug it back in.
Poor sound or no sound.	• Station or CABLE experiencing problems, tune to another station. • Check sound adjustments (Volume and Mute). • Check for sources of possible interference.
Poor picture or no picture.	• Station or CABLE experiencing problems, tune to another station. • Make sure channels are set into memory. • Check antenna or CABLE connections, adjust antenna. • Check for sources of possible interference. • Check picture control adjustments.
Poor reception on some channels.	• Station or CABLE experiencing problems, tune to another station. • Make sure channels are set into memory. • Station is weak, adjust antenna to receive desired station. • Check for sources of possible interference.
Poor color or no color.	• Station or CABLE experiencing problems, tune to another station. • Make sure channels are set into memory. • Check picture control adjustments. • Check antenna or CABLE connections, adjust antenna. • Check for sources of possible interference.
Picture wobbles or drifts.	• Station or CABLE experiencing problems, tune to another station. • Make sure channels are set into memory. • CABLE company is scrambling signal. • Adjust antenna.
Digital broadcasting screen problem.	• Check digital signal strength.

SYMPTOMS	POSSIBLE SOLUTIONS
No CATV reception.	• Check all CABLE connections. • Set TV/CABLE menu option to the CABLE mode. • Station or CABLE system problems, try another station.
Horizontal or diagonal bars on screen.	• Check antenna connections, adjust or re-direct antenna. • Check for sources of possible interference.
No reception above channel 13.	• Make sure TV/CABLE menu option is in the appropriate mode. • If using antenna, check UHF antenna connections.
No Remote operation.	• Batteries are weak, dead or inserted incorrectly. • Remote is out of range, move closer to TV (within 15 feet). • Make sure Remote is aimed at sensor. • Confirm there are no obstructions between the Remote and the TV. • Make sure the power cord is plugged in.
TV shuts off.	• No broadcast on station tuned. • Sleep Timer is set. • Power interrupted.
Closed - Caption is not activated.	• TV station experiencing problems or program tuned is not closed captioned. Try another channel. • Check CABLE connection or VHF/UHF antenna, reposition or rotate antenna. • Set closed caption decoder in the menu.
Display is not shown in your language.	• Select proper language in the menu options.

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Specifications

Power supply: AC 120V, 60Hz
Power Consumption: Operation : 110 Watts
                                  Stand by :   3 W

Weight: 88.2 lbs (40.0 kg)
Dimensions: Width: 29-1/8 inches (740.0 mm)
                                  Height: 22-5/8 inches (575.0 mm)
                                  Depth: 19-7/16 inches (494.5 mm)

Inputs: VIDEO: 1 V (p-p)/75 ohms
              AUDIO: –8 dBm/50k ohms
              S-VIDEO: Y: 1 V (p-p), 75 ohms
                                  C: 0.286 V (p-p), 75 ohms
              COMPONENT: Y: 1 V (p-p), 75 ohms
                                  PR: 0.7 V (p-p), 75 ohms
                                  PB: 0.7 V (p-p), 75 ohms

Output: AUDIO: –8 dBm/50k ohms

Antenna input: VHF/UHF/CABLE In 75 ohm coaxial

Picture Tube: 27 inches (676.0 mm diagonal)

Tuner Type: NTSC Standard
                                  ATSC Standard (8VSB), QAM

Receiving Channels: VHF   2-13
                                  UHF   14-69
                                  CABLE TV   14-36 (A)-(W)
                                             37-59 (AA)-(WW)
                                             60-85 (AAA)-(ZZZ)
                                             86-94 (86)-(94)
                                             95-99 (A-5)-(A-1)
                                             100-125 (100)-(125)
                                             01 (5A)

Speakers: 1-13/16 inches (45.7 mm) × 3-7/8 inches (99.1 mm), 8 ohm × 2

Sound output power: 1.0 W + 1.0 W

ACCESSORY: Remote Control
                                  "AAA" battery × 2

Design and specifications are subject to change without notice.

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Limited Warranty

What your warranty covers:
- Defects in materials or workmanship.

For how long after your purchase:
- 90 days from date of purchase for labor charges.
- One year from date of purchase for parts.
- Two years from date of purchase for the picture tube.

What your warranty does not cover:
- Customer instruction. (Your Owner's Manual describes how to install, adjust, and operate your television. Any additional information should be obtained from your dealer).
- Installation and related adjustments.
- Signal reception problems not caused by your television.
- Damage from misuse or neglect.
- Batteries.
- Customer replacement fuses.
- Damage from images burnt onto the screen.
- Special, incidental or consequential damages.
- A television that has been modified or incorporated into other products or is used for institutional or other commercial purposes.
- A television purchased or serviced outside the U.S.A.
- Acts of nature, such as but not limited to lightning damage.

How you get service:
- Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the product is within the warranty period must be presented to obtain warranty service. For rental firms, proof of first rental is also required.
- Call 1-800-336-1900 and have your unit's date of purchase and model/serial number ready. The model/serial number information can be found on the back of your unit. If it is determined your unit requires service, you will be directed to take your unit to an Authourized Service Center.

Product registration:
- Please complete and mail the Product Registration Card packed with your TV. It will make it easier to contact you should it ever be necessary. The return of the card is not required for warranty coverage.

Limitation of Warranty:
- THE WARRANTY STATED ABOVE IS THE ONLY WARRANTY APPLICABLE TO THIS PRODUCT. NO VERBAL OR WRITTEN INFORMATION GIVEN BY TTE TECHNOLOGY, INC., ITS AGENTS OR EMPLOYEES SHALL CREATE A GUARANTY OR IN ANY WAY INCREASE OR MODIFY THE SCOPE OF THIS WARRANTY.
- REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. TTE TECHNOLOGY, INC. SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT OR ARISING OUT OF ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. THIS DISCLAIMER OF WARRANTIES AND LIMITED WARRANTY ARE GOVERNED BY THE LAWS OF THE STATE OF INDIANA EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED TO THE APPLICABLE WARRANTY AND WARRANTY PERIOD SET FORTH ABOVE.

How state law relates to this warranty:
- Some states do not allow the exclusion nor limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.
- This warranty gives you specific legal rights, and you also may have other rights that vary from state to state.

If you purchased your unit outside the United States or seek warranty coverage outside the United States:
- This warranty does not apply. Contact your dealer for warranty information.

Service calls which do not involve defective materials or workmanship are not covered by this warranty. Costs of such service calls are the sole responsibility of the purchaser.

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